

CDM FEDERAL PROGRAMS CORPORATION

March 15, 1990

Ms. Elaine Spiewak
TES VII Regional Project Officer
U.S. Environmental Protection Agency
CERCLA Enforcement Section
841 Chestnut Street, 6th floor
Philadelphia, PA 19107

PROJECT: EPA CONTRACT NO.: 68-W9-0004
DOCUMENT NO.: TES7-C03041-EP-BPCX
SUBJECT: Work Assignment C03041
February 1990 Monthly Oversight Report
Standard Chlorine Site
Delaware City, Delaware
TES7-C03041-RT-BPDB-02

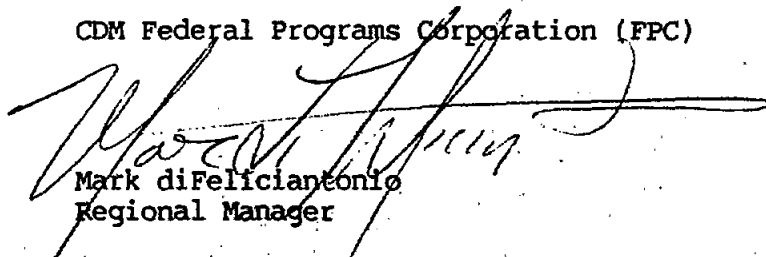
Dear Ms. Spiewak:

Please find enclosed the February 1990 Monthly Oversight Report at the Standard Chlorine site in Delaware City, Delaware as partial fulfillment of the reporting requirements for this work assignment.

If you have any comments regarding this submittal, please contact me at (215) 293-0450 within two weeks of the date of this letter.

Sincerely,

CDM Federal Programs Corporation (FPC)



Mark diFelicianantonio
Regional Manager

Mdf/akc

Enclosure

cc: ~~Robert Murphy~~, EPA Work Assignment Manager, CERCLA Region III
Jean Wright, TES VII Zone Project Officer (letter only)
Constance V. Braun, FPC Program Manager
Robert Murphy, Versar, Inc. (letter only)

FEBRUARY 1990
MONTHLY OVERSIGHT REPORT
STANDARD CHLORINE SITE
DELAWARE CITY, DELAWARE

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, D.C. 20460

Work Assignment No.	:	C03041
EPA Region	:	III
Site No.	:	3PH6
Contract No.	:	68-W9-0004
CDM Federal Programs		
Corporation Document No.	:	TES7-C03041-RT-BPDB-02
Work Assignment Project Manager	:	Kathryn Garris
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Date Prepared	:	March 15, 1990

AR304125

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Attachment 1: Copies of Field Notebook

AR304126

1.0 INTRODUCTION

CDM Federal Programs Corporation (FPC) received a work assignment (WA No. C03041) for continued enforcement support to the U.S. Environmental Protection Agency (EPA) Region III during a Remedial Investigation/Feasibility Study (RI/FS) at the Standard Chlorine of Delaware, Inc. (SCD) site located in Delaware City, Delaware. The TES VII Team Member is conducting oversight of field investigations performed by the RP and their contractor, Roy F. Weston, Inc., and their drilling subcontractor, James C. Anderson Drillers.

Standard Chlorine of Delaware, Inc. manufactures chlorobenzenes on a 46-acre site in Delaware City, Delaware. In September 1981, about 5,000 gallons of monochlorobenzene spilled from a railroad car on the Standard Chlorine property. Subsequent sampling was performed and identified chlorobenzenes in onsite soils, in shallow ground water underlying the site, and in nearby Red Lion Creek. The RP and their contractor, Roy F. Weston, Inc., have studied this problem and have prepared reports on the extent of contamination, evaluated remedial alternatives and feasible technologies, and have begun recovery of contaminated ground water at the site. In September 1985, the SCD site was proposed by the EPA for the National Priorities List (NPL).

On January 5, 1986, onsite storage tanks ruptured and 562,000 gallons of paradichlorobenzene and trichlorobenzene were spilled onto the SCD property and into the adjacent wetlands. The RP engaged a remedial contractor and initiated clean-up activities within hours of the spill occurrence. The RP and the clean-up contractor prepared the ESD detailing emergency clean-up activities and ongoing remedial activities at the SCD site.

Standard Chlorine signed a consent order with the Delaware Department of Natural Resources and Environmental Control (DNREC) on January 22, 1988. As required in the consent order, they submitted a Phase I RI/FS work plan for approval by DNREC. The consent order was then amended so that a single site-wide RI/FS could be performed. A revised RI/FS work plan was then submitted to EPA and DNREC and was approved for the current activities at the SCD site.

2.0 SUMMARY OF ACTIVITIES

The TES VII Team Member conducted oversight of the RP contractor field investigations from February 7, 1990, through February 23, 1990, at the SCD site located in Delaware City, Delaware. A summary of the field activities observed by the TES VII Team Member are presented in this section. Details of the daily activities performed at the site were recorded in the field notebook. Copies of the notebook are included as Attachment 1.

The following personnel were at the SCD site between February 7, 1990 and February 23, 1990:

<u>Personnel</u>	<u>Affiliation</u>	<u>Dates at Site</u>
Jan Spohn	TES VII Team	February 7, 8, 9, 20, 21, and 23
David Spencer	TES VII Team	February 14, 15, and 16
David Cairns	Weston	February 7, 8, 9, 14, and 15
Lyn Lawlor	Weston	February 9, 16, 20, 21, and 23
Pat Duran	Weston	February 8 and 9
John Urban	J.C.A. Drilling	February 7, 8, 9, 14, 15, and 16
Joe Jester	J.C.A. Drilling	February 7, 8, 9, 14, 15, 16, 20 21, and 23
Dave Borrel	J.C.A. Drilling	February 7, 8, 9, 14, 15, and 16
Chris McCardy	J.C.A. Drilling	February 20, 21, and 23
Bob Touhey	SCD	February 14, 16, 20, 21, and 23
Mike Apgar	Delaware DNREC	February 15 and 20
Bob Guarni	U.S. EPA	February 15
Bernice Pasquini	U.S. EPA	February 15

Monitoring well MW-1 was installed from February 7, 1990, to February 9, 1990. The well was drilled to a depth of 74.5 feet below the ground surface. The water table was reached at 36 feet below the ground surface, and clay was first encountered at a depth of 74 feet. The well screen was placed to a depth of 74.5 feet and consisted of a 10-foot section of 4-inch diameter stainless steel with a 0.020-inch slot size. The riser pipe consisted of 66.5 feet of 4-inch diameter carbon steel. A sandpack was placed up to 57 feet below the ground surface using 700 pounds of sand. A bentonite seal was placed by tremie on top of the sandpack using 30 - 35 gallons of bentonite slurry. Finally, grout was tremied on top of the bentonite seal using 100 gallons of a cement/bentonite (5%) mix. The following HNu and OVA readings were obtained from the following depths for well MW-1:

<u>Depth</u>	<u>HNU Reading</u>	<u>OVA Reading</u>
0 - 2 feet	-	1 ppm
3 - 5 feet	-	-
8 - 10 feet	-	0 ppm
13 - 15 feet	-	0 ppm
18 - 20 feet	-	0 ppm
23 - 25 feet	-	1 ppm
28 - 30 feet	-	0 ppm
33 - 35 feet	-	1 ppm
38 - 40 feet	-	1 ppm
43 - 45 feet	4 ppm	3 ppm
48 - 50 feet	5 ppm	4 ppm
53 - 55 feet	1 ppm	1 ppm
58 - 60 feet	2 ppm	3 ppm
63 - 65 feet	-	12 ppm
65 - 67 feet	4 ppm	12 ppm
67 - 69 feet	15 ppm	6 ppm
69 - 71 feet	60 ppm	60 ppm
71 - 73 feet	-	400-500 ppm
73 - 75 feet	100 ppm	>1000 ppm

During drilling, all cuttings were drummed, and the split-spoon sample with the highest HNU reading was collected for laboratory analysis. All drilling and sampling was conducted in Level D personal protection. The drilling rig and equipment were steam cleaned prior to and after well installation, and the split-spoon samplers were decontaminated with an Alconox-detergent wash, a tap water rinse, a methanol rinse, and a final DI water rinse.

In addition to drilling and monitoring well installation, well development was also performed between February 7 and 9, 1990. During this time, monitoring well MW-7 was developed by first blowing air into the well using an air compressor to clean the well screen. Then, the well was purged by pumping at a rate of approximately 1 gallon per minute. All of the purge water was placed in 55-gallon drums.

From February 14, 1990, through February 16, 1990, monitoring wells MW-3, MW-5, and MW-8 were developed, and well MW-11 was drilled. This monitoring well was drilled to a depth of 73 feet, including 10 feet into the clay layer. After drilling, an 8-inch carbon steel outer casing was installed to a depth of 73 feet, and it was pushed an additional 1 foot into the clay. A tremie pipe was inserted to a depth of 40 feet, and 35 gallons of grout was pumped into the hole. At this point, the RP contractor determined that the tremie

pipe must be extended further down the hole (i.e., to a depth of approximately 60 feet). The drillers attempted to use a smaller 1/2-inch tremie pipe, but it could only be inserted to a depth of 54 feet. After several additional attempts to insert the tremie pipe to a depth of 60 feet were unsuccessful, the casing was removed from the hole. The borehole was then reamed, and the casing was reinstalled on Monday, February 19, 1990.

Between February 14 and 16, 1990, water levels and total well depths were measured for several of the monitoring wells. The recorded levels and depths were as follows:

<u>Well</u>	<u>Depth to Water (feet)</u>	<u>Total Well Depth (feet)</u>	<u>Height of Well Casing (feet)</u>
MW-2	41.37	62.16	1.53
MW-3	43.82	64.06	2.47
MW-4	49.12	70.87	2.46
MW-6	46.64	70.16	2.84
MW-7	44.34	59.57	2.22
MW-8	37.52	53.68	1.63
MW-9	39.35	49.42	2.40

From February 20, 1990, through February 23, 1990, monitoring wells MW-1 and MW-9 were developed, and monitoring well MW-11 was re-drilled to a depth of 144 feet using the mud rotary drilling method. During drilling, the clay layer was encountered to a depth of 118 feet, and water was reached at a depth of approximately 135 feet. Continuous split-spoon samples were taken during drilling, and no HNu or OVA readings above background were obtained. All cuttings were drummed, and split-spoon samplers were decontaminated using an Alconox wash, water rinse, methanol rinse, and DI water rinse. The drill rig was decontaminated, and the outer carbon steel well casing was flushed with approximately 1,000 gallons of water prior to drilling.

3.0 PROBLEMS AND RESOLUTIONS

During the installation of well MW-11, the drill rig failed. This caused a delay of two days in drilling activities. To resolve this, the drilling subcontractor brought a new rig onsite. In addition, the drillers could not insert the tremie pipe to a sufficient depth for grouting the borehole after installation of the outer casing at well location MW-11. The problem was due to the minimal 1/2-inch clearance between the riser pipe fitting and the wall of the borehole. To resolve this problem, the casing was pulled, and the borehole was reamed. Subsequently, the outer casing was re-installed and drilling continued.

Due to the inability of the RP contractor to obtain access to the Air Products and Occidental properties for the purpose of installing three additional monitoring wells, further well drilling was postponed. This problem had not been resolved as of the end of the February 1990, and consequently, ground-water sampling will be delayed for at least two months.

4.0 FUTURE ACTIVITIES

During March, the RP contractor will collect fish samples. Additionally, the RP contractor will attempt to resolve the Air Products and Occidental property access problems, so that the three offsite monitoring wells can be installed. Ground-water sampling, which was originally scheduled for late February and early March, will be delayed until at least May 1990.

ATTACHMENT 1

Copies of Field Notebook

AR304133

(34)

Wednesday January 31, 1990

1500 Split spoon taken 23-25, is taken
OVA readings 0 ppm

1510 Split spoon taken 28-30 ft is taken
OVA reading is 0 ppm 5 ppm

1515 Split spoon taken from 33-35 ft.
OVA reading is 5 ppm 0 ppm

All cuttings are being drummed

1545 Split spoon taken from 38-40 ft
Sample is moist but water level has
not quite been reached OVA reads
5-1 ppm

1550 Drillers are quitting for day

1600 Versar off site

[Signature]

AR304134

(35)

Wednesday Feb 7, 1990

0800 Versar (G. Spina.)
m-site

Weather: Cloudy w/
chance of showers

Temp 40-45°

Weather: JCA 40

Western are on site
yet

0900 JCA (Spina) Western,
Joe (Garcia), Dave
(Bordillo) on-site

0915 JCA informed me
that a part broke
on the drill rig
yesterday. They took
the part to be
reordered and to
get the wrong part
back

JRS

(30)

0930 John informed me that they are going to make a phone call and then return and finish spouting wells. Don't want to bring well development until D. Collins arrives.

1000 JCA adding more to top of wells to finish all

1045 John to Jim Davis. Weston has informed me that Dave, Sauras was on his way.

1050 JCA repairing drill rig.

1140 Williams go to lunch.

JRS

(37)

1200 D. Sauras (Weston) arrives on site.

1300 D. Sauras needs to speak w/ Bob-Trouthy Re. placement of next monitor well. Re. maintenance JCA will work on well development.

1345 Sauras developing MD-7 using an compressor, developed water, so collected in a 55 gal drum. Very little water pumping out.

1420 D. Sauras informed me 2 wells had been completed. Dave Verson was not on site.

JRS

AR304135

(38)

1430 Dullens setting
up to begin
MU #1 (Quartz pipe)
Open, still
working on well
development
(Wooten) and SCO
had some discussion
earlier regarding
the placement of
the well, but
have agreed on
a location

1515 Begin MU-1
split spoon
sampled 0-2'
OVA background
reading 4.5 ppm
OVA reading 6 ppm

Note: All cuttings
are downmarked
All personnel
safety in Hardhat

JR5

(39)

split spoon and
background reading
available
Wooten, JVA also
sited in area
on track, suite, over
booth and gloves

1530 split spoon
taken 8-10'
OVA reading 0 ppm

1555 split spoon
taken 13-15'
OVA reading 4.5 ppm
(background)

1605 split spoon
taken 17-20'
OVA reading background

1615 split spoon
taken 23-25'
OVA reading 1 ppm

JR5

(40)

1025 Split spoon
taken 28-30'
OVR reading 2 ppm
Drilling complete
for the day

1030 Veron off-site
Drilling to
summit @ 0830
on 2/8/90

~~Jan 10
1990~~

JRS

(41)

Thursday Feb. 8, 1990

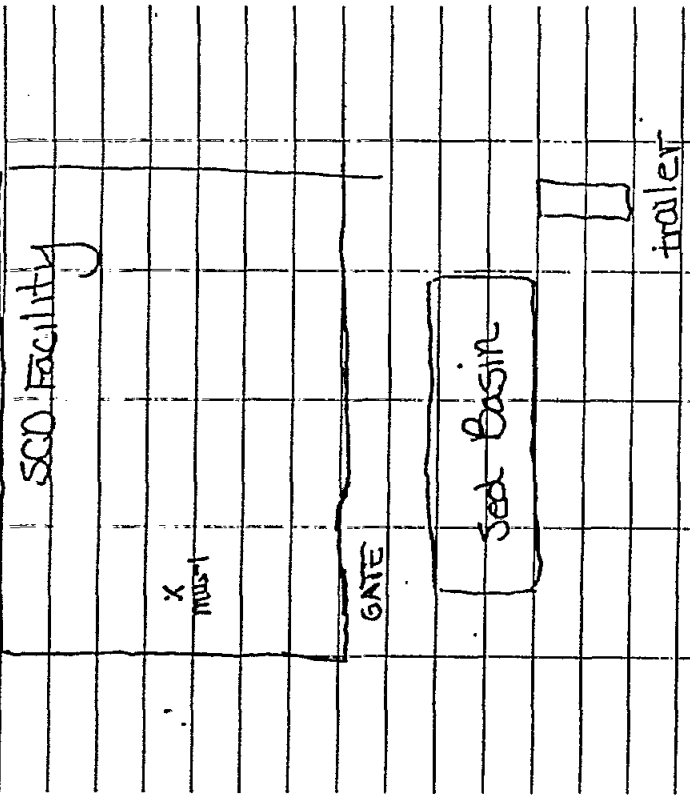
0815 Veron (J. Gordon)
on site
Western (D. Cairns),
Grt. Duran (on site)
JCS (Oden Wilson), Ge
Cretch, Dave Lewis
on site

Weather: Sunny
and mild.
Durbins are replacing
a pump on the
rod. Drilling should
begin in about
45 mins.

1000 Drilling still
working on rig
D. Cairns didn't say
spare

JRS

Location of MW-1



1050 Drilling on MW-1 begins

Note: Record consists of Alconos 50' x 10' area, on top water, MEON racks,

JRS

DI water reuse

1110 Split spool taken 33-35'

OVA reading 1 ppm

1130 Split spool taken 38-40'

OVA reading 1 ppm

DI water (bottles) 30-37' very little recovery due to hitting gravel

Drillers need to get water to entrance drilling and that that we going to break for lunch

1300 Drilling resumed

Note: Out and O. Borella was working on well development. MW-7 is

JRS

4

complete. Buried
at a rate of approx
1 ppm

1317 Split spoon
taken 43-45'
OVA reading 3 ppm
HNU reading 4 ppm

1335 Split spoon
taken 48-50'
OVA reading 4 ppm
HNU reading 5 ppm

1420 Split spoon taken
53-55'
OVA reading 1 ppm
HNU 1 ppm

1423 Split spoon
taken 58-60'
OVA reading 3 ppm
HNU 2 ppm

JRS

45

1412 Split spoon
taken 63-65'
OVA reading 2 ppm

1500 Split spoon taken
68-70' 65-67'
OVA reading 2 ppm
HNU 4 ppm

1515 Split spoon taken
73-75' 67-69'
OVA reading 6 ppm
slight trace of
clay in bottom of
spoon

HNU reading 15 ppm

1550 Split spoon
taken 78-80' 69-71'
OVA reading 60 ppm
HNU reading 60 ppm
1605 Split spoon taken
83-85' 71-73'
OVA reading 400-500
HNU reading

JRS

(46)

About 4-5" discolored
dark gray silt east of
spoon red.
gray areas 400-500ppm
red 70ppm
~~Bituminous~~
VOA/BVA taken

1400 split spoon
taken 73-75'
silt clay layer
(potomac) at depth of 74'
OVA @ 1000ppm
Western sample
VOA/BVA taken
HNU ~ 100ppm

Note: All cuttings
are being
documented

1400 Begin installation
of well casing
drilled to depth
of 75'

JRS

(47)

1710 Butting for
casing from
50 to foot on
before drilling
will begin welding
used burning
acetylene & gas
cutting machine to
weld on site

1702 Set well casing
10', 4" SS to
depth of 75'
Set rubber shoe
(~ 70' 4" catfish steel)
joints are welded
to give larger
and larger space
when placing
sand pack & bottom

1750 Place cap on
and pour sand
(500 lbs) + 200 on
bottom

JRS

(48)

1855 Sand pack
 measured to
 a distance of
 57 ft. drilling complete
 Friday
 1900 Vercas off-site

AR304141

JRS

(49)

Friday Feb 9, 1990

0830 Vercas (G. Genter)
 on-site

0835 (D. Genter,
 P. Duran) on-site.
 Weather: Clear and
 mild

0900 JCA (G. Genter) on-site

0910 JCA (G. Urban, D. Borell)
 on-site

0930 Back sitting
 no site pour
 bituminous seal

0950 Back pouring
 bituminous seal
 w/ thermal pipe
 (clean, thermal pipes
 used)

1000 approx 30-35 gal
 bituminous seal
 placed well set up

JRS

for approx
200 m²

1015 R. Lander, Winston,
on-site

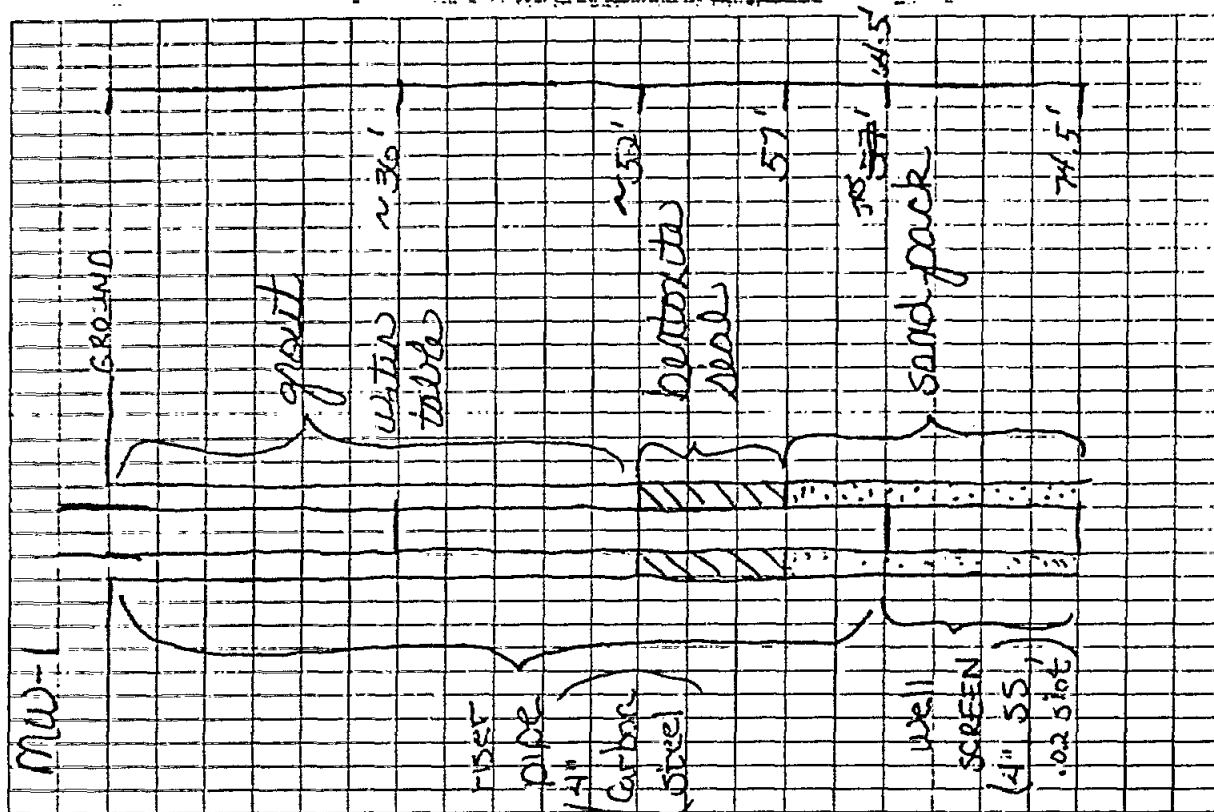
Note: Pit is still
working as well
development

1115 Mid cement-bentonite
grout approx
65-70 bentonite
wood poured
w/ trawl pipe
940 lbs cement
(approx ¹⁰⁰ gal)

1150 Drilling pulling
up rigger

1230 Drilling activities
interrupted for
lunch

JRS



JRS

(38)

1345 Drillers return
from lunch.

1400 Drillers continue
removing augers
Western International
working on well
development.

Having trouble
attaching augers
apart.

1415 Western planned
on working on
slot. to install
deep well downer
pump on aug
matters to be
repaired. Where
are still. 2 deep
and 2 shallow
wells remaining
to be installed.

JR5

(39)

1435 Driller informed
me that their
well is up and
running. However
they will not be
drilling well but
working on well
development.
Plan to begin
deep well (third
rotary) across the
street on Monday
then mud rotary,
well on immediate
property. Still
expecting approval
for across the area
products to complete
the remaining 2
holes. started
auger wells.

1445 Complete removal
of augers.

JR5

(5)

1500 Big truck to
be of grout
channel

Input not mixed
the same, each
time, may be due to not
aggregates of water

batch # Water bags cement

1	$\frac{2}{3}$ (55 gal)	2
2	"	4
3	"	4
4	"	3

1510 4th batch poured

1515 " 3

1515 5th batch grout

poured
Another batch
needed

batch 4 $\frac{2}{3}$ (55 gal) 4

1535 Batch 10 poured

JRS

(5)

Still need another
10-12' of grout

1540 Builders changing
up for the
day

1550 Pouring all into
the

~~1550 Pouring all into
the~~

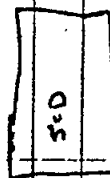
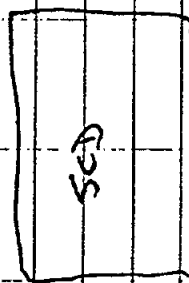
JRS

February 14, 1990

0830 D. Sparker (versal) onsite.
D. Cairns (weston) and John
Urban, Joe Jester, and
Dave Bosella (JCA) onsite.

Rig is down (Gas Flow Problem)

Well #11 is currently under construction. Drilling has been complete to the clay layer. They will be installing the casing to the clay layer mid



X 20.11

0915 Drillers continue to try to
fix the drill rig.

Drillers still working on the Rig.

036 Dollars still working on the Rig

1100
Cantonment is removed from the
rig and taken to be repaired
Drillers will be taking off
well No. 1 & And Developing
well No. 5
No Drilling will be done
today.

ii30 D. Spence + D. C. R. N. T. K.

date	water level	ft from deck to water	total well depth (ft)
4/21/11	2.40	39.35	41.75
4/22/11	2.47	37.52	40.00
4/23/11	2.84	44.34	47.18
4/24/11	2.84	43.82	46.66
4/25/11	2.84	46.64	49.48
4/26/11	2.84	46.64	49.48
4/27/11	2.84	46.64	49.48
4/28/11	2.84	46.64	49.48
4/29/11	2.84	46.64	49.48
4/30/11	2.84	46.64	49.48

38

well #	stickup (ft)	Depth to water (ft)	total (ft) Depth at well
mw-2	1.53	41.37	62.16
mw-4	2.46	49.12	70.87
1235	Drillers pumping	purge water	
	from drums (mw-6) in Tank Trailer		
1250	Drillers break for lunch		
1340	Drillers back. Empty Drums AT		
	MW #3 into drums and truck.		
1400	Drillers pump drums into tanker		
1415	Drillers blowing air down well		
	no 5 in water to purge water		
	and clear the screen. Water forced		
	up the casing is trapped in a		
	55 gal. drum.		
1452	Bob Toohay (SCD) onsite.		
1456	Bob Toohay offsite		

25

0

39

1500	Pump placed in well No. 5 to develop the well. Began to develop the well.
	Pumping at less than 1 gal/min
	Drillers pumping air into well #3
1400	well No 5 still developing. Now pumping AT ~ 1.5 gal/min
1615	JCA off site
	water still developing well #5 well goes dry
1630	versar off site
	western may do more pumping
	near well recharges

[Signature]

AR304146

February 15, 1990

0830 D. Spencer (Verson) arrives onsite
D. Carriants (Weston) onsite
John Urban + Joe Teske (JCA) onsite

" Rig is still down. Development
of wells will be done today.
Drillers are blowing air down
well mw-3.

0915 Pat arrives with Dave (JCA).
Drillers begin to repair rig.

0930 John (JCA) and Dave (Weston)
still pumping air into mw-3.

0956 Development of mw-3 Begins

1045 mw-3 still being developed.

1100 Pump is shut off to allow well to
recover. Verson + Weston go to
check on drillers working on repairing
Rice.

005

1130 Pump turned on in well mw-3

1220 mw-3 still being developed
Drill rig still down

1315 D. Spencer meets with Bernice
Pasquini and Bob Gurnier of
EPA and ~~John~~ (DARCE)

Bernice and Bob are here to
watch drilling of deep well which
has been delayed. They are going
to determine which wells are
sampled during the groundwater
event. Bernice will let me
know how many TCL/TAL
samples will be taken and
from which wells. I must inform

D. Brooks of status of work
for Monday so Bernice can
call him. She may come down
on her own. Bernice will be
handling the job since Bob will
be unavailable beginning week
of 2/20/90.

1330 D. Brooks + D. G. off site

005

(27)

1345 Developing of MW-3 Complete.

Discharge is clear. Weston moves pump to MW-

1400 D. Spencer phones D. Baska (Versar) to inform him of proceedings at site & of information provided by Bob Lunnery.

1415 Weston decommissioning pump on decom pad.

1500 MW-B Developing Begins.

1545 MW-B Still Developing.

1600 MW-B Still Developing.

1610 Drillers offsite.

1630 MW-8 DEY

Versar off site

Weston cleaning up

DB

February 16, 1990

(28)

0830 D. Spencer (Versar) arrives on-site. L. Lawlor (Weston) onsite.

Lynn states that Drillers are beginning to break other rig. They will decom it and then they will remove other rig. They plan on setting the casing today and drilling on Monday. Fin. Sample, 3/5/90

0917 JCA arrives onsite with new drill rig. Proceed to decom pad to decom rig.

0945 JCA Begins decommissioning rig. They are also working on the broken rig.

1030 Bob Toohy (SCD) onsite. Drillers still working on rig.

1035 Bob Toohy offsite.

DB

AR304148

1145 Drill Rig is moved from over hole.

1155 New Rig placed over Hole and set up. Rods are pulled from hole.

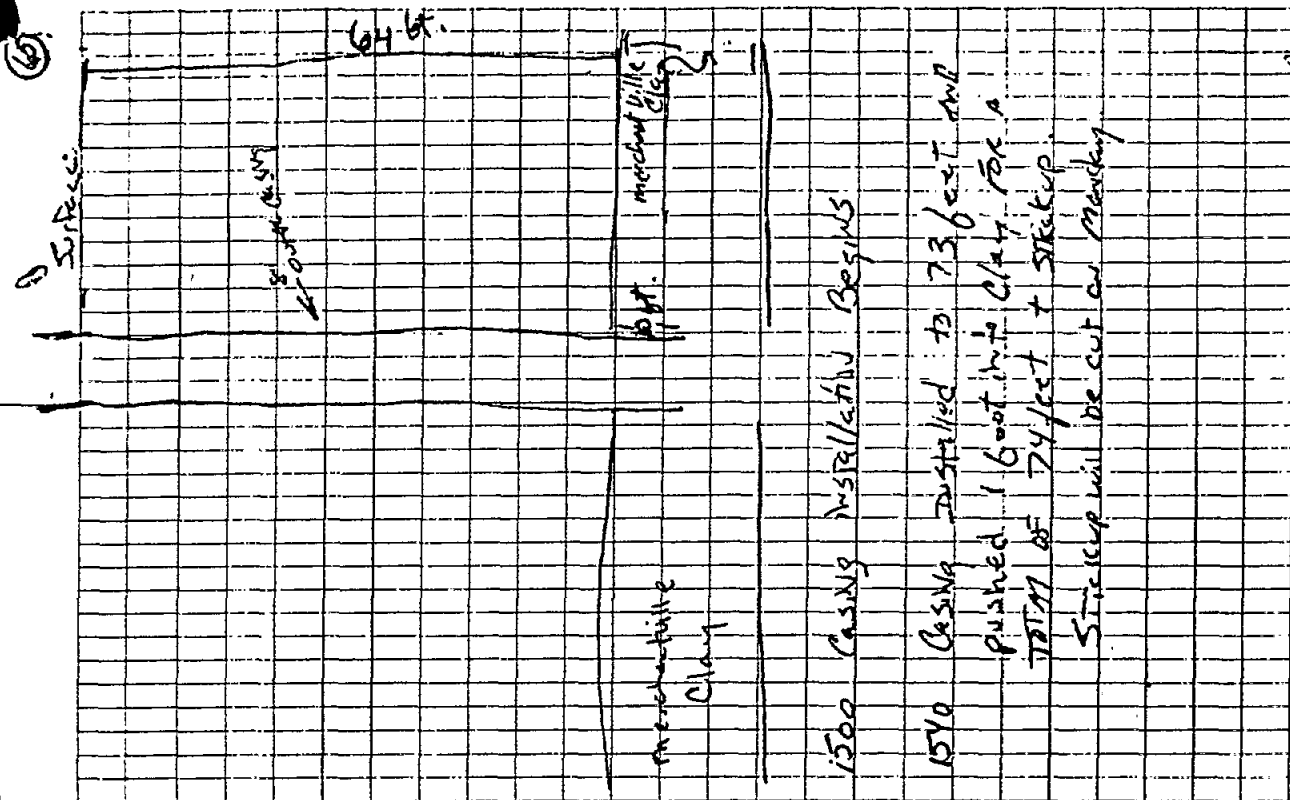
1315 New gauge is placed on hydraulic system replacing one found to be broken. Drillers prepares to continue drilling. Well is currently drilled to ~50 ft. with large BIT

1345 Drilling begins with large ^{Bit} casing will be set at 74 feet (10 feet into clay layer) and grouted.

1410 Drilling completed to 63 feet.

1430 Drilling completed to 73 feet.

OS



(26)

1600 Drillers mixing slout.

4 Bags for 33-40 gallons
of water (each Bag 94 pounds count)

1605 Tremie pipe installed to 40 feet
1st batch of cement pumped into
hole.

1605 2nd batch of grout mixed

1630 Weston tells drillers that
tremie must be lower in
hole. Attempts to do this
are unsuccessful. Couplings and
stabilizers may be preventing
pipe from proceeding down hole.
Drillers get 1/2 inch tremie
pipe to top and get to 60 feet

1700 Small Tremie pipe could not
get past 54 feet. Casing is
pulled out. Will have to be
reset.

205

(27)

1715 Drillers pulling the casing
on Monday, they will ream the
hole and reset the casing.

IF they get the casing set and
grouted on Monday, drilling will
begin late Tuesday or on Wednesday
morning.

1730 Versar off site

Weston + Drillers on site
removing left of casing and
cleaning up.

~~205~~

Monday Feb 20, 1990

0830 Vansco (G. Spahr)
on-site.

Weather: Clear,
windy and cold.
Partly, Vansco now
JCA on-site yet

0915 Still no drilling
activities. David
reg positioned.

over MW 11. Appears
that casing was
reinstalled yesterday.
Vansco, waiting @
MW 11 location. Vansco
and JCA still have
not secured @ this
site.

0930 Checked w/ suid
Lynn Linton (Vansco)
signed in 0902
(Must be back

JES

@ trailer. Drivers
still have not arrived
on-site. I assume no
field activities will begin
until drivers arrive.

0940 R. Linton arrived at
site of MW 11.
They informed me
that they had
been instructed
yesterday and expected
the drilling will be
performed today over
this day to settle
Drillers have
used some more gravel,
clean up casing,
down this and
develop MW-9 and
MW 11

0945 JCA (G. Spahr)
and David Thayer
on-site.
Vansco contacts G. Spahr

JES

70

1015 Bullens cutting top of casing blow

1030 Litter from mud trough emptied into 55 gal drums

1110 Bullens mixing grout 4 bags @ 94 lbs in approx 65 gal water

1115 Grout poured using (hammer) pipe

1130 Mike Agar on DNREC off-site area, no drawing going on well return fluids on Fri. Bob-Touhey on-site

1150 Mike Agar off site, Bullens began developing MW-9 (pumping) Development water returned

1140 Bob-Touhey off-site JRS

AR304152

1210 Return to drill rig MW-9 left pumpjacks very low after 12:00 will return yesterday to check

Notes: Log, and the team had everything now about obtaining clearance to drill areas located on the Shadocks and Occidental property

Notes: Bullens was told by Weston and B. Touhey not to climb on rig w/o safety harness

1220 Bullens place, note down contents of bag begin pumping water down to shut casing

James appears on cell of Shadocks, Union from mud trough, so put in 55 gal drums

JRS

12

1300 SCD captures collector (ropes) from down, containing liquid from mud brought to determine if it can be dumped.
1310 Chuo goes to get more water (Kogal) to continue pumping into well.
1330 Chuo returns w/ full tank of water. Begins pumping water into casing still downing dig from mud brought.
1400 Drillers working now.
1430 Drill rig taken to be discovered.
1445 Drillers checking equipment.
Drillers' Lander and development of m-9 is completed? Development

JRS

13

13

of m-9 will not be initiated to follow the drills well (can) as area around m-9 had previous to begin drilling tomorrow morning.

1445 Contracted office must call back @ 1500

Note: John Wilson's address of Debarwa, however, not on site today however, no actual drilling done.

1500 Wilson left site for day.

~~John Wilson~~

JRS

⑦

Wednesday Feb 21, 1990

0821 Vesper (G. Spoor)

on-site

Wester (Lynn Lawler)

JCS (Ore Foster)

Chris (McCondy)

on-site

Weather: Clear

and cold

Dullers sitting

up to contable

drilling mud-11

Lynn sitting up

soon. fired

0900 Dullers still

sitting up

0930 Well by Dullers

continuous split

spoon. Lynn

said, well will be

we know- if he

gets any drilling

on, H.N.D. on G.N.

JCS

⑧

Note: Decon concepts
of raising in 2 down
hole in, top water,
DT in water and
MC OH

0940 Drilling initiated

(Mud Motor)

Dullers casing to

in place drill

but drilling down

center of Dullers

casing

1040 Split spoon

collected 72-80'

clay (very dense)

1120 Split spoon

80-82'

1135 Split spoon

82-84'

1145 2 representatives

from Dullers

leave on-site up

case. Lynn says

70

they are sticking out
are low fish
sawdust

1155 Split spoon

82-96' (light gray clay)

1210 Bob-Turkey or-site

1215 Split spoon

86-88'

limp soup sitting
into Potomac

(light gray clay)

fishy all-site

scoop much darker
toward the bottom

1230 Split spoon

88-90' in

Potomac

1240 Much break

1315 Drill was started

from back

1340 Drill was

continued

1350 Split spoon

89-92'

71

day gray mud w/
split

1412 Split spoon

82-94'

1442 Split spoon

84-96' clay w/ some sand

Note: Drill sitting

are drum back

1450 Bob-Turkey or

site

1500 Split spoon

86-98' clay

1530 Split spoon

98-100'

clay w/ some

split

1540 Split spoon

100-106'

clay w/ some sand

1600 Split spoon

102-104'

clay

(18)

1620 Split spoon
104-106" clay

1642 Split spoon
106-108"

clay

last sample for
the day. Dr. Williams
cleaned up for
the day.

I asked Lynn for
projected schedule,
that said they would
continue drilling
tomorrow and
complete the
well on Fri or
Sat. (Still need
to discuss MW-1
MW-11) No work
anticipated next
week. Fish
sampling will
begin on 3/5/90
(one maybe too)

(19)

days)
GIS sampling will be
delayed until 3 of Oct
wells are completed.
(to Lynn's knowledge)

1700 Verson off site,
driving home, resume
on 2/22/90

~~John~~

Monday Feb 23, 1990

0945 Vacation on-site
Weather: Mild,
overcast chance of
rain
Western (Lynn Switzer)
Joa (Spe Gator, Chris
McCarthy) on-site
Drilling in progress
Lynn said they
are at a depth
of 136' just hit
some water.
Clay layer went
to depth of 118'
since then, have
been in sand w/ the
plan to go
another 10 ft

0955 Split spoon
136-138'
red clay very
dense

1035 Split spoon
138-140' red and
gray clay (mostly
gray)

1050 Split Spoon on-site
5 min only

1145 Split spoon
140-142'
gray clay

Note: Lynn said
water was encountered
@ a depth of approx
135'

1220 Split spoon
142-144'
clay

Drillers take break
Lynn said they
plan on working
to 1530 today
and the faith

(82)

They will be
working on Max
definitely probably
not doing any
draws and mud-
but that depends
on Saturday's
progress

1200 Vessar off site

(83)

MARCH 5, 1990

0800 D. Senevir (Vessar) arrives onsite.
Bill Duran (Weston) onsite. He
is in charge of putting in
seawater well.

0905 Vessar (Spencer H. Lube), Weston
(William L. Lube), Jerry Dinkins
and Durek (Diane Vessar) go
to Red Lion Creek.

0930 Weston is setting up equipment in park
sampling. D. Vessar (Durek) informs
D. Senevir that Weston will be
taking 3 samples (2 locations, 1 left
whole fish samples of 2 species at each
location). Vessar is expected to take
two split samples of fillets. Weston
expects to fill Vessar samples
for them (since Vessar was not informed
properly they are not equipped to fill
the fish themselves).

0940 Weston is still setting up D. Senevir
goes to call D. Backio.

22